1. A method of measuring and classifying in predetermined categories optically observable changes in skin and mucous membrane, comprising the steps of:

    1. taking at at least one instant in time at least one digital image of a change in a skin suitable for determining the three-dimensional structure and color structure of the change and at least one digital reference image of at least the vicinity of the change;

    2. computing surface measurement data comprising three-dimensional coordinates of the change and color values scaled to the reference image on the basis of the digital image and digital reference image;

    3. carrying out a first process of classification on the basis of the surface measuring data;

    4. carrying out a further process of classification differing from the first process by at least one modified algorithm;

    5. Issuing the results of the first and second classification processes.

2. The method of claim 1, further comprising the step of storing the digital image and the digital reference image in a memory.

3. The method of claim 1, wherein the surface measurement data are additionally computed on the basis of temporal changes of the skin.

4. The method of claim 1, wherein the first process of classification is additionally optionally carried out on the basis of externally collected relevant patient-related data.

5. The method of claim 4, wherein the patient-related data includes at least one of age, type of skin, allergies, dermatoscopic diagnoses and

sonoghraphic diagnoses.

6. The method of claim 1, wherein the further process is carried out by an artificial neuronal net.

7. The method of claim 1, wherein the further classification process includes the use of selected comparative data.

8. The method of claim 7, wherein the selected comparative data includes data evaluated by experts.

9. The method of claim 7, wherein the selected comparative data is stored in a memory.

10. The method of claim 1, further including the step of projecting at least one light pattern on the change during taking of the digital image.

11. The method of claim 1, wherein the digital image is taken with unstructured light.

12. The method of claim 1, wherein at least one step is performed on a local computer.

13. The method of claim 1, wherein at least one step is performed on a central computer.

14. The method of claim 7, wherein the comparative data is stored on at least one data bank in a central computer.

15.   The method of claim 7, wherein the comparative data is stored in at least one data bank in a local computer.

16.   The method of claim 2, wherein the memory is in a local computer connected to a central computer in which comparative data relevant to the skin change is stored.

17.   An apparatus for measuring and classifying an optically observable change in a skin, comprising:

1.   a measuring head comprising at least two calibrated cameras for generating at least two photogrammetrically evaluatable digital images of the change and a pattern projector for projecting a suitable pattern onto an area of the skin to be measured, at least one of the cameras being adapted for taking a color reference image of healthy skin in the vicinity of the change;

2.   a first computer for preparing, processing and storing the digital images and for computing surface measurement comprising three-dimensional coordinates and associated color values scaled to the reference image; and

3.   a second computer for carrying out a classification process on the basis of at least the surface measuring data computed by the first computer.

18.   The apparatus of claim 17, further comprising a third computer for carrying out a further classification process on the basis of the surface measuring data by one of a modified algorithm and select data evaluated by an expert from a data bank.

19.   The apparatus of claim 17, wherein the first and second computers are an

integrated unit.

20. The apparatus of claim 18, wherein at least one of the first, second and third computers is a local computer and at least one other of the first, second and third computers is a central computer.

5

10

15

20

25